

VERSION WITH MARKINGS TO SHOW CHANGES MADE:

IN THE SPECIFICATION:

Replace the title "~~THYRISTOR WITH VOLTAGE SURGE LOADABILITY IN THE RECOVERY TIME~~" with the following title "THYRISTOR WITH RECOVERY TIME VOLTAGE SURGE RESISTANCE"

IN THE CLAIMS:

1. (Amended) A thyristor (1) ~~having the following construction:~~
in a body (10) made of differently doped a semiconductor material, said
thyristor comprising:
~~which has an electrode (13) serving as cathode and also an electrode (14)~~
~~serving as anode, there are formed~~
~~[-]a cathodal first emitter (15) region of a first conduction conductivity type;~~
(n)
a first contact region contacting said first emitter region;
~~[-]a cathodal first base (16) region of a second conduction conductivity type~~
disposed on said first emitter region opposite the first contact region; (p);
~~[-]an anodal a second base (17) region of the first conduction conductivity~~
type disposed on said first base region; (n);
~~[-]an anodal a second emitter (18) region of the second conduction~~
conductivity type (p) disposed on said second base region; and

a second contact region contacting said second emitter region opposite said second base region;

[-]at least one driver stage (20) having a third emitter region of the first conductivity type formed in said second base region and isolated from said first emitter region, said driver stage capable of ~~for~~ amplifying a control current (I) fed into the cathodal first base region; (16),

[-]the driver stage (20) has a further emitter (21) of the first conductivity type (n), which is formed in the cathodal base (16) and is isolated from the cathodal emitter (15), and also

a metallization an electrically conducting layer (22) which makes contact both with electrically connecting the cathodal first base region (16) and with the third further emitter region (21),

wherein the thyristor includes at least one of the following features:

said third emitter region and said first base region located beneath said layer of said driver stage together with said second base region form a transistor having a gain factor (α'_{npn}) of the at least one driver stage (20), which factor is defined, below the metallization layer (22) of said driver stage (20), by the further emitter (21), the cathodal base (16) and the anodal base (17), that is greater than a transistor gain factor (α_{npn}) of a transistor formed beneath the first electrode of the thyristor (1), which factor is defined, below the cathode (13) of the thyristor (1) by the cathodal first emitter region (15), the cathodal first base region and the second anodal base region (17), and/or

said first base region, said first base region and said second base region located beneath said layer of said driver stage form a transistor having a gain factor (α') that is greater than a gain factor (α) of a transistor formed beneath the first electrode of the thyristor by the first base region, the second base region and the second emitter region, and short circuits are formed in the second base, said short circuits connecting the second base and the second contact region to one another, wherein an electrical conductivity of the short circuits formed beneath the electrically conducting layer is smaller than an electrical conductivity of the short circuits formed beneath the first contact region.

~~— a transistor gain factor (α'_{ppp}) of the at least one driver stage (20), which factor is defined, below the metallization layer (22) of said driver stage (20), by the cathodal base (16), the anodal base (17) and the anodal emitter (18), is greater than a transistor gain factor (α_{ppp}) of the thyristor (1), which factor is defined, below the cathode (13) of the thyristor (1), by the cathodal base (16), the anodal base (17) and the anodal emitter (18), and /or~~
~~— anode short circuits (174) connect the anodal base (17) and the anode (14) to one another and have a smaller electrical conductivity below the metallization layer (22) of the at least one driver stage (20) than below the cathode (13) of the thyristor (1).~~

2. (Amended) The thyristor ~~as claimed in~~ of claim 1, ~~characterized in that the anodal second base (17) has further including~~ a stop zone (172) of the first conductivity type (n).
3. (Amended) The thyristor ~~as claimed in~~ of claim 2, ~~characterized in that wherein~~ a doping level of the stop zone (172) is doped more weakly in a region (220) lying below located beneath the metallization electrically conducting layer (22) of the at least one driver stage (20) is smaller than a doping level in a region (130) lying below located beneath the cathode (13) first contact region of the thyristor (1).
4. (Twice amended) The thyristor ~~as claimed in~~ of claim 2, ~~characterized in that wherein~~ a doping level of the stop zone (172) is doped more highly in the a region (220) lying below located beneath the metallization electrically conducting layer (22) of the at least one driver stage (20) is greater than in a region (300) lying below located beneath a location (30) for feeding a adapted to supply the control current to (I) into the first cathodal base region (16).

5. (Twice amended) The thyristor as claimed in claim 1, ~~characterized in that~~
~~wherein~~ the anode short circuits (174), ~~below~~ formed beneath the
metallization electrically conducting layer (22) of the driver stage (20), are at
a greater distance (d1) from one another ~~and/or have a smaller diameter~~
(d2) than the short circuits formed beneath below the first contact region
cathode (13) of the thyristor (1).
6. (Twice amended) ~~An arrangement comprising a~~ The thyristor (1) as claimed
~~in of~~ claim 1, and further comprising a diode (4), ~~the thyristor (1) and the~~
~~diode (4) being~~ electrically connected to the second contact region ~~one~~
~~another.~~

Add the following claims:

7. (New) The thyristor of claim 1, wherein the short circuits formed beneath
the electrically conducting layer of the driver stage have a smaller diameter
than the short circuits formed beneath the first contact region.
8. (New) The thyristor of claim 1, wherein the first conductivity type is n-type
and the second conductivity type is p-type.
9. (New) The thyristor of claim 1, wherein the first conductivity type is p-type
and the second conductivity type is n-type.

REMARKS

This Amendment is submitted preliminary to the issuance of an Office Action in the present application.

Applicant has amended claims 1 to 6 present them in proper form and language and to better encompass the full scope and breadth of the invention, notwithstanding applicant's belief that the claims would have been allowable as originally filed. Accordingly, applicant asserts that no claims have been narrowed within the meaning of the *Festo*-decision. *Festo Corp. v. Shoketsu Kinsoku Kogyo Kabushiki Co.*, 56 USPQ2d 1865 (Fed. Cir. Nov. 29, 2000)(en banc). In addition, applicant submits new claims 7 to 9 to set forth features deleted from original claim 1. In addition, applicant has amended the title to better reflect the subject matter of the present invention.

When the Examiner takes this application up for action, s/he is requested to take the foregoing into account.

Respectfully submitted,

By: 

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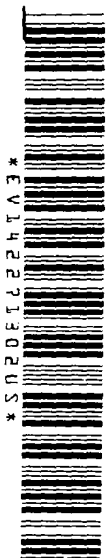
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